## SEQUENCE LISTING

|  |   |     | . '                                     | • |   |             |   |
|--|---|-----|---|---|---|-------------|---|
| <110>  | Guy, Charles L.   |     |   |   | • |             | * |
|  | Kaplan, Fatma   | 1   |   |   | ·                                       | 0.0         |   |
| * .  | Sung, Dong Yul  | ,   |   |   |   |             |   |
|  | sung, bong fur  |     |   | 0                                       |   |             |   |
|  |   |     |   | *                                       |   |             |   |
| <120>  |   |     | rovidin                                 | g Plant                                 | s with                                  | Increased   | l Resistance                            |
|  | to Environmental Str  | ess |   |   |   |             |   |
|  |   |     |   | *                                       |   |             |   |
| <130>  | UF-326XC1   |     |   |   | • •                                     |             |   |
| (130)  | JUL SZUNGI  |     |   |   |   | 1.4         |   |
|  | ***************************************   |     |   |   |   |             |   |
|  | US 60/390,384   |     |   |   |   |             |   |
| <151>  | 2002-06-21  | - 1 |   |   | 0                                       | · .         |   |
|  |   |     | - A                                     | *                                       |   |             | 9                                       |
| <160>  | ,32   |     |   | :                                       |   | 100         |   |
|  |   |     |   |   |   |             |   |
|  | PatentIn version 3.2  |     |   |   |   |             |   |
| <11/05   | Pacencin version 3:2  |     |   |   |   |             |   |
| •  |   | 0   |   | ٠.                                      |   |             |   |
| <210>  | 1   |     |   | 9                                       |   |             |   |
| <211>  | 18  |     |   |   |   |             | to a second of the                      |
| <212>  | DNA   |     | *                                       | • . •                                   | * 7                                     |             |   |
| <213>  | Artificial sequence   |     |   | - May 11 - 1                            | . '' '                                  |             |   |
|  |   |     | •                                       | - '.                                    |   |             | 2. 2. 1                                 |
| 220  |   |     |   |   |   | 6.          |   |
| <220>  |   |     |   |   |   |             |   |
| <223>  | oligonucleotide   |     |   |   |   |             |   |
|  |   |     |   |   |   |             |   |
| <400>  | 1   | •   |   |   |   |             |   |
| acacca   | gaga atacaatg   |     | •                                       |   |   | .T. 14      | 18                                      |
|  | 3,3,  |     |   | * • •                                   |   |             |   |
|  |   |     |   |   |   |             |   |
|  |   | : ' | • •                                     |   |   |             |   |
| <210>  | 2   |     |   |   |   |             |   |
| <211>  |   |     |   |   |   |             |   |
|  | 18  |     | 4                                       | *                                       |   | • • • • • • |   |
| . <212>  | DNA   |     | 4 4                                     | * '                                     |   |             | *                                       |
|  | DNA   |     | 4 4 4 5 4 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 | *                                       |   | ,<br>,,,,,, |   |
| <212><br><213>   |   |     |   |   |   |             |   |
| <213>  | DNA   |     |   |   |   |             |   |
| <213><br><220>   | DNA<br>Artificial sequence  |     |   |   |   |             |   |
| <213>  | DNA   |     |   |   |   |             |   |
| <213><br><220><br><223>  | DNA Artificial sequence oligonucleotide   |     |   |   | *                                       |             |   |
| <213><br><220><br><223><br><400>   | DNA Artificial sequence oligonucleotide 2   |     |   |   | *                                       |             |   |
| <213><br><220><br><223><br><400>   | DNA Artificial sequence oligonucleotide   |     |   |   | *                                       |             | 18                                      |
| <213><br><220><br><223><br><400>   | DNA Artificial sequence oligonucleotide 2   |     |   |   | *                                       |             | 18                                      |
| <213><br><220><br><223><br><400>   | DNA Artificial sequence oligonucleotide 2   |     |   |   | *                                       |             | 18                                      |
| <220><223><400>caacgg  | DNA Artificial sequence oligonucleotide 2 caca atctcatg   |     | •                                       |   | *                                       |             | 18                                      |
| <213> <220> <223> <400> caacgg   | DNA Artificial sequence oligonucleotide 2 caca atctcatg 3   |     | •                                       |   | *                                       |             | 18                                      |
| <213> <220> <223> <400> caacgg   | DNA Artificial sequence oligonucleotide 2 caca atctcatg 3 16  |     |   |   | *                                       |             | 18                                      |
| <213> <220> <223> <400> caacgg   | DNA Artificial sequence oligonucleotide  2 caca atctcatg  3 16 DNA  |     |   |   | *                                       |             | 18                                      |
| <213> <220> <223> <400> caacgg   | DNA Artificial sequence oligonucleotide 2 caca atctcatg 3 16  |     |   |   |   |             | 18                                      |
| <213> <220> <223> <400> caacgg   | DNA Artificial sequence oligonucleotide  2 caca atctcatg  3 16 DNA  |     |   |   |   |             | 18                                      |
| <213> <220> <223> <400> caacgg <210> <211> <212> <213>                   | DNA Artificial sequence oligonucleotide  2 caca atctcatg  3 16 DNA  |     |   |   |   |             | 18                                      |
| <213> <220> <223> <400> caacgg <210> <211> <212> <213>                   | DNA Artificial sequence  oligonucleotide  2 caca atctcatg  3 16 DNA Artificial sequence                     |     |   |   |   |             | 18                                      |
| <213> <220> <223> <400> caacgg <210> <211> <212> <213>                   | DNA Artificial sequence oligonucleotide  2 caca atctcatg  3 16 DNA  |     |   |   |   |             | 18                                      |
| <213> <220> <223> <400> caacgg <210> <211> <212> <213> <223>             | DNA Artificial sequence  oligonucleotide  2 caca atctcatg  3 16 DNA Artificial sequence  oligonucleotide    |     |   |   |   |             | 18                                      |
| <220> <220> <223> <400> caacgg <210> <211> <212> <213> <220> <223> <400> | DNA Artificial sequence  oligonucleotide  2 caca atctcatg  3 16 DNA Artificial sequence  oligonucleotide  3 |     |   |   |   |             |   |
| <220> <220> <223> <400> caacgg <210> <211> <212> <213> <220> <223> <400> | DNA Artificial sequence  oligonucleotide  2 caca atctcatg  3 16 DNA Artificial sequence  oligonucleotide    |     |   |   |   |             | 18                                      |

| <210>   | 4  |
|---|--|
| <211>   | 18   |
| <212>   | DNA  |
| <213>   | Artificial sequence  |
| (2157   | Arctificial Sequence   |
| <220>   |  |
|   |  |
| <223>   | oligonucleotide  |
|   |  |
| <400>   |  |
| ctcaac  | ttct tcccgaça  |
| ٠.,   |  |
|   |  |
| <210>   |  |
| <211>   |  |
| <212>   |  |
| <213>   | Artificial sequence  |
|   | an in the angle teath of the training for the part of                    |
| <220>   | 경영하는 사람들이 하면 그녀를 하는 것들이 되었다. 그 사람들이 다 하는 것이 되었다.                         |
| <223>   | oligonucleotide  |
|   | 그 사꾸 그는 전략이 된 이 많이 아니라 하나는 그 사람이 그리고 있다.                                 |
| <400>   |  |
| ggaaça  | agcg gacctcat  |
|   |  |
|   |  |
| <210>   |  |
| <211>   |  |
| <212>   | DNA  |
| <213>   | Artificial sequence  |
|   |  |
| <220>   |  |
| <223>   | oligonucleotide  |
|   |  |
| <400>   |  |
| tctcag  | cgat cttgcctt 1  |
|   |  |
| 1 12  |  |
|   |  |
| <210>   |  |
| <210><br><211>  |  |
|   | 7<br>18<br>DNA   |
| <211><br><212>  | 18   |
| <211><br><212>  | 18<br>DNA  |
| <211><br><212>  | 18<br>DNA  |
| <211><br><212><br><213><br><220>                              | 18<br>DNA<br>Artificial sequence   |
| <211><br><212><br><213>                                       | 18<br>DNA  |
| <211><br><212><br><213><br><220>                              | 18<br>DNA<br>Artificial sequence   |
| <211><br><212><br><213><br><220><br><223><br><400>            | 18 DNA Artificial sequence  oligonucleotide 7                            |
| <211><br><212><br><213><br><220><br><223><br><400>            | 18 DNA Artificial sequence  Oligonucleotide                              |
| <211><br><212><br><213><br><220><br><223><br><400>            | 18 DNA Artificial sequence  oligonucleotide 7                            |
| <211> <212> <213> <220> <223> <400> gctggc                    | 18 DNA Artificial sequence  oligonucleotide 7                            |
| <211> <212> <213> <220> <223> <400> gctggc. <210>             | 18 DNA Artificial sequence  oligonucleotide  7 aggc gtaacact             |
| <211> <212> <213> <220> <223> <400> gctggc. <210> <211>       | 18 DNA Artificial sequence  oligonucleotide  7 aggc gtaacact  1          |
| <211> <212> <213> <220> <223> <400> gctggc. <210> <211> <212> | 18 DNA Artificial sequence  oligonucleotide  7 aggc gtaacact  1 8 21 DNA |
| <211> <212> <213> <220> <223> <400> gctggc. <210> <211>       | 18 DNA Artificial sequence  oligonucleotide  7 aggc gtaacact  1          |
| <211> <212> <213> <220> <223> <400> gctggc. <210> <211> <212> | 18 DNA Artificial sequence  oligonucleotide  7 aggc gtaacact  1 8 21 DNA |

T:\sequences\UF\UF-326XC1\as-filed.doc/DNB/sl

UF-326XC1

|                | 3                    | UF-326XC1 |
|----------------|----------------------|-----------|
|                |                      |           |
| <400>          |                      | χ         |
|                | tgagg agttgtagaa g   | 21 .      |
| 49944          | 40433                | ==        |
| ٠.             |                      |           |
| <210><211>     |                      |           |
| <212>          |                      |           |
| <213>          |                      |           |
|                |                      |           |
| <220>          |                      | ***       |
| <223>          | oligonucleotide      | 00        |
| <400>          | 9                    |           |
| cgtct          | tgaac cacacagc       | 18        |
|                |                      |           |
| . <210>        | 10                   |           |
| <211>          |                      |           |
| <212>          | DŅĀ                  | *         |
| <213>          | Artificial sequence  |           |
| <220>          |                      |           |
| <223>          |                      |           |
|                |                      |           |
| <400>          |                      |           |
| gcaaa          | gtete ecteetet       | 18        |
|                |                      |           |
| <210>          |                      |           |
| <211>          |                      |           |
| <212><br><213> |                      |           |
| . \2137        | Arctificial sequence |           |
| <220>          |                      |           |
| <223>          | oligonucleotide      |           |
| <400>          | 11                   |           |
|                | gtaga ggaaacaa       | 18        |
|                |                      |           |
| 210            |                      |           |
| <210><br><211> |                      | 3.        |
| <212>          |                      |           |
| <213>          |                      |           |
| 200            |                      |           |
| <220>          | oligonucleotide      | • .       |
| ,~~~,>         | orragomacteourae     |           |
| <400>          |                      | * 4       |
| tcgaa          | gaaga ccgctggt       | 18        |
|                |                      | _         |
| <210>          | 13                   |           |
| <211>          |                      |           |
|                |                      | 9.00      |

T:\sequences\UF\UF-326XC1\as-filed.doc/DNB/s1

| <212>  | DNA  |          |
|--------|--|----------|
| <213>  | Artificial sequence  | •        |
|        |  | <b>.</b> |
|        |  |          |
| <220>  |  | -        |
| <223>  | oligonucleotide  |          |
|        |  |          |
|        |  |          |
| <400>  | 13   |          |
| aagatg | aagg aaatgagtg   | 19       |
| 1.5    |  | ٠.       |
|        |  |          |
|        |  | •        |
| <210>  | 14   |          |
| <211>  | 18   |          |
|        |  | .*.      |
| <212>  |  |          |
| <213>  | Artificial sequence  | **       |
|        |  | -        |
| <220>  |  | • • • •  |
|        |  |          |
| <223>  | oligonucleotide  |          |
|        |  | . 🕶      |
| <400>  | 14   |          |
|        | ttct ggtctcgg  | 18       |
| Çaccıç | deec agreecad  | 10       |
|        |  |          |
|        |  |          |
| <210>  | . <b>15</b>  |          |
| <211>  |  | 1.00     |
|        |  |          |
| <212>  |  |          |
| <213>  | Artificial sequence  |          |
|        |  |          |
| <220>  |  | •        |
|        | alimonyalaatida  |          |
| <223>  | oligonucleotide  |          |
|        |  |          |
| <400>  | 15   |          |
| ggadda | aggg caagtaag  | 18       |
| 334524 |  |          |
|        |  |          |
|        |  |          |
| <210>  | 16   |          |
| <211>  | 18   | - 99     |
|        |  |          |
| <212>  | DNA  |          |
| <213>  | Artificial sequence  |          |
|        |  |          |
| <220>  |  |          |
|        | oligonyal optido   | ,        |
| <223>  | oligonucleotide  |          |
|        |  |          |
| <400>  | • 16   |          |
|        | tcct cctctgtg  | 18       |
|        |  | -        |
|        |  |          |
|        |  |          |
| <210>  | 17   |          |
| <211>  | 20   |          |
|        |  |          |
| <212>  | DNA  |          |
| <213>  | Artificial sequence  |          |
| -      | "我要你,我们们在我们的时候,我们就是一个人的时候,我们就是我们的。""我们就是我们的。""我们就是我们的,我们就是我们的,我们就是我们的一个人,我们就是我们的 |          |
| <220>  |  |          |
|        | oliganualootida  |          |
| <443>. | oligonucleotide  |          |

<212>

DNA

T:\sequences\UF\UF-326XC1\as-filed.doc/DNB/s1

|  |  | and the second s |                |                  |
|--|--|--|----------------|------------------|
| -2135  | Artificial sequence  |  |                |                  |
| (2137,   | Arctriciat pedactice   |  |                | -                |
|  | 0.5  | •  |                |                  |
| <220>  |  |  |                |                  |
| <223>  | oligonucleotide  |  |                |                  |
|  |  |  |                |                  |
| <400>  | 22   |  |                |                  |
|  | cggg ttaatgct  |  |                | _ 18             |
| ccogco   | 0999 00000900  |  |                | 10               |
| . 7  |  |  |                | and the state of |
|  |  |  |                |                  |
| <210>  | 23   |  |                |                  |
| <211>  | 18   |  | and the second |                  |
| <212>  | DNA  |  | 40             |                  |
|  | Artificial sequence  | and the second of the  |                |                  |
| 15 - 1   |  |  |                | 7 v .            |
| <220>  |  |  |                |                  |
|  |  |  |                |                  |
| <223>  | oligonucleotide  |  |                |                  |
|  |  |  | * *            |                  |
| <400>  | 23   |  | *              | - P              |
| ggagcg   | attt gtctggtt  |  |                | 18               |
|  |  |  |                |                  |
|  |  |  | *              |                  |
| <210>  | 24   |  | * 0            |                  |
|  |  |  |                |                  |
| <211>  | 18   |  |                | •                |
| <212>  |  |  |                |                  |
| <213>  | Artificial sequence  |  |                |                  |
|  |  |  |                | *.)              |
| <220>  |  |  | * *            | The state of the |
| <2-23>   | oligonucleotide  |  |                |                  |
|  |  |  |                |                  |
|  | 011300100  |  |                | 10.5             |
|  |  |  |                |                  |
| <400>  | 24   |  |                | 10               |
| <400>  |  |  |                | 18               |
| <400>  | 24   |  |                | 18               |
| <400><br>tgatga  | 24<br>ctcg cgcttact  |  |                | 18               |
| <400>  | 24   |  |                | 18               |
| <400><br>tgatga  | 24<br>ctcg cgcttact  |  |                | 18               |
| <400><br>tgatga<br><210><br><211>  | 24<br>ctcg cgcttact<br>25<br>18  |  |                | 18               |
| <400><br>tgatga<br><210><br><211><br><212>   | 24<br>ctcg cgcttact<br>25<br>18<br>DNA   |  |                | 18               |
| <400><br>tgatga<br><210><br><211><br><212>   | 24<br>ctcg cgcttact<br>25<br>18  |  |                | 18               |
| <400><br>tgatga<br><210><br><211><br><212><br><213>  | 24<br>ctcg cgcttact<br>25<br>18<br>DNA   |  |                | 18               |
| <400><br>tgatga<br><210><br><211><br><212><br><213>  | 24 ctcg cgcttact  25 18 DNA Artificial sequence  |  |                | 18               |
| <400><br>tgatga<br><210><br><211><br><212><br><213>  | 24<br>ctcg cgcttact<br>25<br>18<br>DNA   |  |                | 18               |
| <400><br>tgatga<br><210><br><211><br><212><br><213><br><220><br><223>  | 24 ctcg cgcttact  25 18 DNA Artificial sequence oligonucleotide  |  |                | 18               |
| <400><br>tgatga<br><210><br><211><br><212><br><213><br><223><br><400>  | 24 ctcg cgcttact  25 18 DNA Artificial sequence  oligonucleotide   |  |                | 18               |
| <400><br>tgatga<br><210><br><211><br><212><br><213><br><223><br><400>  | 24 ctcg cgcttact  25 18 DNA Artificial sequence oligonucleotide  |  |                | 18               |
| <400><br>tgatga<br><210><br><211><br><212><br><213><br><223><br><400>  | 24 ctcg cgcttact  25 18 DNA Artificial sequence  oligonucleotide   |  |                |                  |
| <400><br>tgatga<br><210><br><211><br><212><br><213><br><223><br><400>  | 24 ctcg cgcttact  25 18 DNA Artificial sequence  oligonucleotide   |  |                |                  |
| <400><br>tgatga<br><210><br><211><br><212><br><213><br><220><br><223><br><400><br>ggagcg   | 24 ctcg cgcttact  25 18 DNA Artificial sequence  oligonucleotide  25 attt gtctggtt   |  |                |                  |
| <400><br>tgatga<br><210><br><211><br><212><br><213><br><220><br><223><br><400><br>ggagcg   | 24 ctcg cgcttact  25 18 DNA Artificial sequence  oligonucleotide  25 attt gtctggtt   |  |                |                  |
| <400> tgatga <210> <211> <212> <213> <223> <400> ggagcg <210> <211>  | 24 ctcg cgcttact  25 18 DNA Artificial sequence  oligonucleotide  25 attt gtctggtt  26 18  |  |                |                  |
| <400> tgatga <210> <211> <212> <213> <223> <400> ggagcg <210> <211> <212>  | 24 ctcg cgcttact  25 18 DNA Artificial sequence  oligonucleotide  25 attt gtctggtt  26 18 DNA  |  |                |                  |
| <400> tgatga <210> <211> <212> <213> <223> <400> ggagcg <210> <211>  | 24 ctcg cgcttact  25 18 DNA Artificial sequence  oligonucleotide  25 attt gtctggtt  26 18  |  |                |                  |
| <400> tgatga  <210> <211> <212> <213> <223> <400> ggagcg  <210> <211> <212> <213>  | 24 ctcg cgcttact  25 18 DNA Artificial sequence  oligonucleotide  25 attt gtctggtt  26 18 DNA  |  |                |                  |
| <400> tgatga <210> <211> <212> <213> <223> <400> ggagcg <211> <211> <212> <213>  | 24 ctcg cgcttact  25 18 DNA Artificial sequence  oligonucleotide  25 attt gtctggtt  26 18 DNA  |  |                |                  |
| <400> tgatga <210> <211> <212> <213> <223> <223> <400> ggagcg <210> <211> <212> <213>  | 24 ctcg cgcttact  25 18 DNA Artificial sequence  oligonucleotide  25 attt gtctggtt  26 18 DNA Artificial sequence                                    |  |                |                  |
| <400> tgatga  <210> <211> <212> <213> <223> <400> ggagcg  <210> <211> <212> <213>  | 24 ctcg cgcttact  25 18 DNA Artificial sequence  oligonucleotide  25 attt gtctggtt  26 18 DNA  |  |                |                  |
| <400> tgatga  <210> <211> <212> <213> <223> <400> ggagcg  <210> <211> <221> <213>  | 24 ctcg cgcttact  25 18 DNA Artificial sequence  oligonucleotide  25 attt gtctggtt  26 18 DNA Artificial sequence  oligonucleotide  coligonucleotide |  |                |                  |
| <400> tgatga  <210> <211> <212> <213> <223> <400> ggagcg  <210> <211> <2212> <213> <400> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210> <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  <210  < | 24 ctcg cgcttact  25 18 DNA Artificial sequence  oligonucleotide  25 attt gtctggtt  26 18 DNA Artificial sequence                                    |  |                |                  |

| <210> 27<br><211> 264<br><212> DNA<br><213> Artificial sequence               |   |
|---|---|
| <220> <223> transit peptide encoding sequence                                 | • |
| <220> <221> CDS <222> (1)(264)  |   |
| <400> 27 atggetteet etatgetete tteegetact atggttgeet eteeggetea ggeeactatg 60 |   |
| gtcgctcctt tcaacggact taagtcctcc gctgccttcc cagccacccg caaggctaac 120         | 1 |
| aacgacatta cttccatcac aagcaacggc ggaagagtta actgcatgca ggtgtggcct 180         |   |
| ccgattggaa agaagaagtt tgagactctc tcttaccttc ctgaccttac cgattccggt 240         |   |
| ggtcgcgtca actgcatgca ggcc 264  |   |
| <210> 28  |   |
| <211> 88<br><212> PRT   |   |
| <213> Artificial sequence   |   |
| <220> <223> transit peptide sequence  |   |
| <400> 28  |   |
| Met Ala Ser Ser Met Leu Ser Ser Ala Thr Met Val Ala Ser Pro Ala 1 5 10 15     |   |
| Gln Ala Thr Met Val Ala Pro Phe Asn Gly Leu Lys Ser Ser Ala Ala 20 25 30      |   |
| Phe Pro Ala Thr Arg Lys Ala Asn Asn Asp Ile Thr Ser Ile Thr Ser 35 40 45      |   |
| Asn Gly Gly Arg Val Asn Cys Met Gln Val Trp Pro Pro Ile Gly Lys 50 55 60      |   |
| Lys Lys Phe Glu Thr Leu Ser Tyr Leu Pro Asp Leu Thr Asp Ser Gly 70 75 80      |   |
| Glv Arg Val Asn Cvs Met Gln Ala   |   |

| <212> DI  |   |                                       |   | Ŷ                                   |          |        | 4.8                    |                        |               |   |
|---|---|---------------------------------------|---|-------------------------------------|----------|--------|------------------------|------------------------|---------------|---|
| <213> A1  | rtificial   | sequen                                | ce .                                      | •                                   |          |        |                        |                        |               | - 1                                     |
| <220><br><223> ti   | ransit pep  | otide e                               | ncoding                                   | sequence                            | <b>a</b> |        |                        | * ()*                  |               |   |
| <220>   |   | *                                     | 0   |                                     |          |        |                        |                        |               |   |
|   | DS<br>1)(174)   | å                                     |   |                                     | i<br>S   |        |                        |                        | •             |   |
| <400> 2   | -   |                                       |   |                                     |          |        | . •                    |                        |               | - *                                     |
| atggcttc  | ct ctatgct  | ctc tt                                | ccgctact                                  | atggtt                              | geet     | ctccgg | jetea                  | ggccact                | atg           | 60                                      |
| gtcgctcc  | tt tcaacgo  | gact ta                               | agtcctcc                                  | getgee                              | ttcc     | cagcca | cccg                   | caaggct                | aac           | 120                                     |
| aacgacat  | ta cttccat  | cac aa                                | gcaacgg                                   | ggaagag                             | gtta     | actgca | itgca                  | ggcc                   |               | ·174                                    |
| · · · · · · · · · · · · · · · · · · ·   |   |                                       | ,   |                                     |          |        | y                      |                        |               |   |
|   | 8   | -                                     | . (1)                                     |                                     |          |        |                        |                        |               |   |
| <212> Pl  | RT<br>rtificial   | sequen                                | .ce                                       | *.                                  |          | **     | 4                      |                        |               | • .                                     |
| <220>   |   | *                                     |   |                                     |          |        |                        |                        |               |   |
|   | ransit per  | otide s                               | equence                                   | • .                                 |          | . (    |                        |                        |               |   |
| <400> 3   | 0   | *                                     |   |                                     |          |        |                        |                        |               |   |
|   |   |                                       |   |                                     |          |        |                        |                        |               |   |
|   |   |                                       |   | + 4                                 |          |        |                        |                        | •             | . ,                                     |
|   | Ser Ser Me  | et Leu                                | Ser Ser                                   |                                     | Met      | Val Al | a Ser                  |                        | a             |   |
| Met Ala   | Ser Ser Me<br>5   | et Leu                                | Ser Ser                                   | Ala Thr                             | Met      | Val Al | a Ser                  | Pro Al<br>15           | a             | * |
| 1   | Ser Ser Me<br>5<br>Thr Met Va<br>20   | • .:                                  |   | 10                                  | · .      |        |                        | 15                     |               | *                                       |
| 1<br>Gln Ala '  | 5<br>Thr Met Va   | al Ala                                | Pro Phe                                   | 10<br>Asn Gly<br>25                 | Leu      | Lys Se | er Ser<br>30<br>er Ile | 15<br>Ala Al           | a             | *                                       |
| 1<br>Gln Ala  | 5<br>Thr Met Va<br>20<br>Ala Thr An<br>35   | al Ala                                | Pro Phe<br>Ala Asn<br>40                  | Asn Gly<br>25<br>Asn Asp            | Leu      | Lys Se | er Ser<br>30<br>er Ile | 15<br>Ala Al           | a             |   |
| 1<br>Gln Ala  | 5<br>Thr Met Va<br>20<br>Ala Thr Ai   | al Ala                                | Pro Phe<br>Ala Asn<br>40                  | Asn Gly<br>25<br>Asn Asp            | Leu      | Lys Se | er Ser<br>30<br>er Ile | 15<br>Ala Al           | a             |   |
| 1 Gln Ala Phe Pro   | 5<br>Thr Met Va<br>20<br>Ala Thr An<br>35   | al Ala                                | Pro Phe<br>Ala Asn<br>40<br>Cys Met       | Asn Gly<br>25<br>Asn Asp            | Leu      | Lys Se | er Ser<br>30<br>er Ile | 15<br>Ala Al           | a             | *                                       |
| 1 Gln Ala Phe Pro Asn Gly 50 <210> 3 <211> 2                                    | Thr Met Va<br>20<br>Ala Thr An<br>35<br>Gly Arg Va                                | al Ala                                | Pro Phe<br>Ala Asn<br>40<br>Cys Met       | Asn Gly<br>25<br>Asn Asp            | Leu      | Lys Se | er Ser<br>30<br>er Ile | 15<br>Ala Al           | a             | *                                       |
| 1 Gln Ala Phe Pro Asn Gly 50 <210> 3 <211> 2 <212> Di                           | 5<br>Thr Met Va<br>20<br>Ala Thr An<br>35<br>Gly Arg Va                           | al Ala<br>rg Lys<br>al Asn            | Pro Phe<br>Ala Asn<br>40<br>Cys Met<br>55 | Asn Gly<br>25<br>Asn Asp            | Leu      | Lys Se | er Ser<br>30<br>er Ile | 15<br>Ala Al           | a             |   |
| 1 Gln Ala Phe Pro Asn Gly 50 <210> 3 <211> 2 <212> D <213> A <400> 3            | Thr Met Va<br>20<br>Ala Thr An<br>35<br>Gly Arg Va<br>1<br>94<br>NA<br>rabidopsis | al Ala<br>ng Lys<br>al Asn<br>s thali | Pro Phe Ala Asn 40 Cys Met 55             | Asn Gly<br>25<br>Asn Asp<br>Gln Ala | Leu      | Lys Se | er Ser<br>30<br>er Ile | 15<br>Ala Al<br>Thr Se | a<br>r        |   |
| 1 Gln Ala Phe Pro Asn Gly 50 <210> 3 <211> 2 <212> D <213> A <400> 3            | Thr Met Va<br>20<br>Ala Thr An<br>35<br>Gly Arg Va<br>1<br>94<br>NA<br>rabidopsis | al Ala<br>ng Lys<br>al Asn<br>s thali | Pro Phe Ala Asn 40 Cys Met 55             | Asn Gly<br>25<br>Asn Asp<br>Gln Ala | Leu      | Lys Se | er Ser<br>30<br>er Ile | 15<br>Ala Al<br>Thr Se | a<br>r        | 60                                      |
| 1 Gln Ala Phe Pro Asn Gly 50  <210> 3 <211> 2 <212> Di <213> A <400> 3 tcatttct | Thr Met Va<br>20<br>Ala Thr An<br>35<br>Gly Arg Va<br>1<br>94<br>NA<br>rabidopsis | al Ala<br>rg Lys<br>al Asn<br>s thali | Pro Phe Ala Asn 40 Cys Met 55             | Asn Gly<br>25<br>Asn Asp<br>Gln Ala | Leu      | Lys Se | er Ser<br>30<br>er Ile | 15 Ala Al Thr Se       | a<br>r<br>tcg | 60<br>120                               |

|           |          |          |       |       |       | •       |       |       |      |         |   |      |       |          |       |     |      |
|-----------|----------|----------|-------|-------|-------|---------|-------|-------|------|---------|---|------|-------|----------|-------|-----|------|
| aagga     | aaatga a | agtto    | cacto | a co  | gagaa | agaco   | tto   | cacgo | ccag | aagg    | gtgaa                                   | ac o | cctt  | gaga     | aa    | . 2 | 40   |
| tggga     | agaagc ( | tccac    | gtto  | et ct | cata  | accca   | a çad | eteca | aga  | acga    | acgct                                   | ag ( | cgtt  |          | • • • | . 2 | 94   |
|           | · ·      | . '      |       |       |       |         |       |       |      |         |   |      | 4.    | :        | : .   |     |      |
| <210:     |          |          |       |       |       | ٠.,     |       | ,     | * •  |         |   |      |       |          | ; ;   | 0.9 |      |
| <211:     |          |          | .=    |       |       |         |       |       |      |         |   |      | ,     |          |       |     |      |
| <212      |          | ·<br>· a |       |       |       | •       |       | 8     | ٠.   |         | 0                                       |      | 1.5   |          |       |     |      |
| <213:     | > Arab:  | ıdops    | sis t | nalı  | ana   |         | . :   |       |      |         |   |      |       | `. e - * |       |     |      |
| <400·     | > 32     | ٠.       |       |       |       |         |       | i, i  |      |         |   |      |       | 1        | -     |     |      |
| C T U U . | , ,,,,   |          |       |       |       | 4.5     |       |       |      | . *     |   |      |       |          |       |     |      |
| Met (     | Glu Leu  | Thr      | Leu   | Asn.  | Ser   | Ser     | Ser   | Ser   | Leu  | Ile     | Lys                                     | Arg  | Lys   | Asp      | Ϊ,    |     |      |
| 1         |          |          | 5     |       |       |         |       | 10    |      |         | . #                                     | , ,  | 15    |          |       |     |      |
| - 20      | 1 .      |          |       | -     |       |         |       |       |      |         |   |      |       |          |       | · . | . `. |
| Ala 1     | Lys Ser  | Ser      | Arg   | Asņ   | Gln   | Glu     | Ser   | Ser   | Ser. | Asn     | Asn                                     | Met  | Thr   | Phe      | ٠.,   |     |      |
|           |          | 20       |       |       | •     | : : · · | 25 .  |       |      |         |   | 30   | 0     | • .      | :•    |     |      |
|           |          | _        |       | *     |       | _ 3     |       |       |      |         | <u>.</u>                                | _    |       |          | 1     |     |      |
| Ala I     | Lys Met  | Lys      | Pro   | Pro   | Ţḥr   | Tyr     | GIn   | Phe   | GIn  | Ala     | Lys                                     | Asn  | Şer   | Val      |       |     | 9    |
| - · · ·   | * 35     |          | ,     |       |       | 40      |       |       |      |         | 45                                      |      |       |          |       |     |      |
| Lve (     | Glu Met  | Lyc      | Dhe   | Thr   | Hic   | G111    | Lve   | Thr   | Dhe  | Thr     | Pro                                     | Glu  | Gliv  | Glu      |       |     |      |
|           | 50       | цуз      | THE   | 1111  | 55    | Olu     | цуз   |       | Liic | 60      | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | Olu  | O'T Y | Outu     |       |     | •    |
|           |          |          |       |       |       |         |       |       |      |         |   |      |       | 1.2      |       |     |      |
| Thr 1     | Leu Glu  | Lys      | Trp   | Glu   | Lys   | Leu     | His   | Val   | Leu  | Ser     | Tyr                                     | Pro  | His   | Ser      | -     | .1  |      |
| 65        |          |          |       | 70    |       |         | -     |       | 75   | e - 8 ° |   |      |       | 8.0      |       |     |      |
|           |          |          | ٠,    |       |       | ٠.      |       |       |      |         |   | ٠    |       |          | ,     | •   |      |
| Lys A     | Asn Asp  | Ala      | Ser,  | Val   |       | :       |       | ٠.    | •    | * · ·   |   |      | •     |          |       | :   |      |
|           |          |          | 0 =   |       |       |         |       |       |      |         |   |      |       |          |       |     |      |